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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/699,368	10/31/2003	Marcel-Catalin Rosu	YOR920030508US1	3047

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EXAMINER

DUNN, DARRIN D

ART UNIT	PAPER NUMBER
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2121

MAIL DATE	DELIVERY MODE
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08/11/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/699,368	Applicant(s) ROSU ET AL.	
	Examiner DARRIN DUNN	Art Unit 2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 and 19-38 is/are pending in the application.
- 4a) Of the above claim(s) 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 and 19-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is responsive to the communication filed on 05/30/2008.
2. Claims 1-17 and 19-38 are pending in the application.

Examiner's Interpretation: Computer Readable Medium

Note: Paragraph [0019] of applicant's instant specification refers to "some and/or all of the steps of the methods and the data structure discussed above can be stored on a computer readable medium." Applicant does not elaborate what may constitute a computer readable medium. However, applicant provides that software applications are retrievable from a storage device and loadable into memory. Therefore, for purposes of examination, a computer readable medium, in light of the specification, is interpreted as a tangible medium that functionally interrelates computer code to realize the methods of the invention.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-17 and 19-38 are rejected under 35 U.S.C. 102(b) as being anticipated by Boivie (USPN 6415312).
5. As per claims 1 and 23, Boivie teaches a method for distributing content to a plurality of receivers wherein said content is packetized into one or more packets, comprising:

establishing a multicast distribution tree rooted at a sender ([FIG 1- element 12], [COL 4 lines 59-60]); and directing the transmission of each of the one or more packets along at least a portion of the multicast distribution tree ([COL 3 lines 1-10]), the at least a portion of the multicast distribution tree comprising one or more intermediate receivers through which the each of the one or more packets must travel to reach the plurality of receivers ([COL 4 lines 34-45]. [COL 3 lines 44-46], [FIG 1- elements R1, R2, nodes),

wherein the sender defines a different set of the one or more intermediate receivers for each of said one or more packets ([COL 4 lines 30-55])

6. As per claims 2, 11, 24, and 33, Boivie teaches the method of claim 1, wherein the step of directing the transmission further comprises:

encoding the each of the one or more packets with the at least a portion of said multicast distribution tree ([COL 3 lines 1-20]), wherein the multicast distribution tree identifies at least one of the plurality of receivers to which the each of the one or more packets is to be delivered ([COL 3 lines 1-10], [COL 3 lines 44-46], [COL 4 lines 34-58]) and a path along which the each of the one or more packets is to travel to the at least one of the plurality of receivers ([COL 3 lines 30-35])

7. As per claims 3 and 25, Bovie teaches the method of claim 2, wherein the multicast distribution tree is sender-defined ([COL 4 lines 59-60])

8. As per claims 4, 12, 26, and 34, Boivie teaches the method of claim 1, wherein the step of directing the transmission comprises:

sending one of said one or more packets to a first group of the one or more intermediate receivers ([CO 3 lines 44-46]); creating at least one copy. of the one of said one or more packets

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packet by at least one of said first group of the one or more intermediate receivers ([COL 3 lines 65-67]); and forwarding at least one copy of the one of said one or more packets to at least one receiver in a second group of the one or more intermediate receivers within said multicast distribution tree ([COL 3 lines 65-67], [COL 4 lines 1-3] e.g. packet forwarding is applicable to intermediate and destination nodes)

9. As per claims 5, 13, and 27 Boivie teaches the method of claim 1, wherein each of the plurality of receivers that is not a final destination for said one or more packets copies and forwards said each of the one or more packets to a subsequent one of the plurality of receivers receiver in accordance with said at least a portion of the multicast distribution tree ([COL 3 lines 44-47])

10. As per claims 6, 14, 22, 28, and 36, Boivie teaches the method of claim 2, further comprising:

encoding at least some of the one or more packets with forward error correction coding ([COL 7 lines 1-4])

11. As per claims 7, 15, 29, and 37, Boivie teaches the method of claim 4, wherein transmissions from the sender to each of the plurality of receivers and between two of the plurality of receivers are individually accomplished using unicast distribution communication ([COL 3 lines 47-51])

12. As per claims 8, 16, 30, 31, and 38, Boivie teaches the method of claim 1, wherein the step of establishing a multicast distribution tree comprises:
adjusting a structure of the multicast distribution tree to address a given metric, wherein said metric is at least one of cost, delay, bandwidth, latency or reliability ([COL 7 lines 15-30]).

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13. As per claims 9 and 32, Boivie teaches a method for distributing content to a plurality of receivers, wherein said content is packetized into at least one packet, comprising: establishing a multicast distribution tree rooted at a sender ([COL 4 lines 59-60]); and directing the transmission of the at least one packet along at least a portion of the multicast distribution tree ([COL 3 lines 1-10]), the at least a portion of the multicast distribution tree comprising one or more intermediate receivers through which the at least one packet must travel to reach the plurality of receivers ([COL 4 lines 34-45]. [COL 3 lines 44-46], wherein the plurality of receivers to which one or more intermediate receivers are defined by the sender. ([COL 4 lines 30-55])

14. As per claim 10, Boivie teaches the method of claim 9, wherein the one or more intermediate receivers is different for each of the at least one packet ([COL 3 lines 44-46], [COL 4 lines 34-59])

15. As per claim 17, Boivie teaches a system for distributing content to a computer network comprising:

a server adapted for sending at least one data packet ([COL 4 lines 59-60] e.g., node A), where said at least one data packet contains at least a portion of a multicast distribution tree defined by the server for distributing the at least one data packet to at least a first group of receivers ([COL 3 lines 1-20]), the at least a portion of the multicast distribution tree comprising one or more intermediate receivers through which the at least one data packet must travel to reach each receiver in the first group of receivers ([COL 3 lines 44-46], [FIG 1- elements R1, R2]); wherein both the server and the first group of receivers each comprise a packet forwarding mechanism ([COL 3 lines 60-65]).

16. As per claim 19, Boivie teaches the system of claim 17, wherein the distribution tree defines the at least a first group of receivers and the one or more intermediate receivers ([COL 3 lines 44-46], [FIG 1-elements R1, R2])

17. As per claim 20, Boivie the system of claim 17, wherein the system is adapted to change the one or more intermediate receivers for each of the at least one data packet ([COL 4 lines 59-63])

18. As per claims 21 and 35, Boivie teaches system of claim 17, wherein each of the plurality of receivers that is not a final destination for at least one data packet is adapted to copy the at least one data packet and forward the at least one data packet on to at least one receiver in a second group of receivers ([COL 3 lines 44-47], [COL 3 lines 60-67] e.g., copying and forwarding mechanisms are provided via each intermediate and destination node, taking into account whether the node is the last node. Second group of receivers may either be another node and/or a second receiver, such as R2.)

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DARRIN DUNN whose telephone number is (571)270-1645. The examiner can normally be reached on EST:M-R(8:00-5:00) 9/5/4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert DeCady can be reached on (571) 272-3819. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DD
08/07/08

/Albert DeCady/
Supervisory Patent Examiner
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